

Appl. No. 09/980,881  
Amdt. dated August 31, 2005  
Response to Notice of Allowanced  
dated June 1, 2005

PATENT

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings of claims in the application:

**Listing of Claims:**

- 1-2. (canceled)
3. (Previously presented): An isolated DNA encoding the protein of claim 35.
4. (Previously presented): The DNA of claim 3 comprising the coding region of the nucleotide sequence of SEQ ID NO: 1.
5. (Previously presented): A vector into which the DNA of claim 3 is inserted.
6. (Previously presented): A host cell transformed with the vector of claim 5.
7. (Previously presented): A method for producing a protein, wherein said method comprises the steps of culturing a host cell containing the DNA of claim 3 to express a recombinant protein encoded by the DNA, and collecting from the cell or its culture supernatant the recombinant protein expressed from the DNA within the cell.
8. (canceled)
9. (Previously presented): A peptide fragment of the protein of claim 32, wherein the peptide fragment comprises, as the C-terminal 14 amino acids, SEQ ID NO: 9.
10. (canceled)

Appl. No. 09/980,881  
Amdt. dated August 31, 2005  
Response to Notice of Allowanced  
dated June 1, 2005

PATENT

11. (Previously presented): A method for screening a compound that binds to the protein of claim 35, comprising the steps of:

(a) contacting a test sample with the protein or a peptide fragment thereof comprising, as the C-terminal 14 amino acids, SEQ ID NO: 9,

(b) detecting the binding activity between the test sample and the protein or the peptide fragment thereof, and

(c) selecting a compound that has an activity to bind to the protein or the peptide fragment thereof.

12-15. (canceled)

16. (Previously presented): An isolated polynucleotide encoding the peptide fragment of Claim 9.

17. (canceled)

18. (Previously presented): An A $\beta$  production regulator, comprising the protein of claim 35 as an active ingredient.

19. (Previously presented): A pharmaceutical preparation for treating a disease that causes accumulation of A $\beta$  in the brain, wherein said preparation comprises the protein of claim 35 as an active ingredient.

20. (Previously presented): The pharmaceutical preparation of claim 19, further comprising a pharmaceutically acceptable carrier.

21-23. (canceled)

24. (Previously presented): A kit for screening a compound that promotes or inhibits peptidase activity of the protein of claim 35, wherein said kit comprises the protein of claim 35.

Appl. No. 09/980,881  
Amdt. dated August 31, 2005  
Response to Notice of Allowanced  
dated June 1, 2005

PATENT

25. (Previously presented): The kit of claim 24, further comprising a substrate of the protein of claim 35.

26. (Previously presented): The kit of claim 25, wherein said substrate is brain  $\beta$ -amyloid precursor protein.

27-31. (canceled)

32. (Previously presented): The protein of claim 35, wherein said protein comprises, as the C-terminal 14 amino acids, SEQ ID NO: 9.

33. (canceled)

34. (Previously presented): The partial peptide of claim 9, wherein said partial peptide consists of the amino acid sequence of SEQ ID NO: 9.

35. (Previously presented): An isolated protein having peptidase activity towards brain APP, wherein said protein comprises an amino acid sequence of any one of SEQ ID NOS: 2 to 4 or a variant of any of SEQ ID NOS: 2 to 4 in which no more than 30 amino acids are replaced, deleted, inserted, and/or added.

36. (Previously presented): The protein of claim 35 comprising the amino acid sequence of any one of SEQ ID NOS: 2 to 4.

37. (Previously presented): An isolated peptide fragment of human brain carboxypeptidase B consisting of at least 7 contiguous amino acids of SEQ ID NO: 9, wherein the peptide binds to an antibody to a protein having the amino acid sequence of SEQ ID NO:2.

38. (Currently amended): An isolated peptide variant of SEQ ID NO: 9, wherein no more than 5 amino acids of SEQ ID NO: 9 are replaced, deleted, inserted and/or added, wherein the peptide variant binds to an antibody to a protein having the ~~an~~ amino acid sequence of SEQ ID NO:2.

Appl. No. 09/980,881  
Amdt. dated August 31, 2005  
Response to Notice of Allowanced  
dated June 1, 2005

PATENT

39. (Previously presented): A method for screening a compound that binds to the protein of claim 35, comprising the steps of:

- (a) contacting a test sample with a peptide fragment of human brain carboxypeptidase B consisting of at least 7 contiguous amino acids of SEQ ID NO: 9, wherein the peptide binds to an antibody to a protein having an amino acid sequence of SEQ ID NO:2;
- (b) detecting the binding activity between the test sample and the peptide; and
- (c) selecting a compound that has an activity to bind to the peptide.

40. (Currently amended): A method for screening a compound that binds to the protein of claim 35, comprising the steps of:

- (a) contacting a test sample with a peptide variant of SEQ ID NO: 9 consisting of an epitope of human brain carboxypeptidase B, wherein no more than 5 amino acids of SEQ ID NO: 9 are replaced, deleted, inserted and/or added, wherein the peptide variant binds to an antibody to a protein having ~~the an~~ amino acid sequence of SEQ ID NO:2;
- (b) detecting the binding activity between the test sample and the peptide variant;
- and
- (c) selecting a compound that has an activity to bind to the peptide variant.

41. (Currently amended): An isolated peptide fragment of the protein of claim 35, wherein the peptide fragment comprises a C-terminal region in which at least 7 amino acids of SEQ ID NO: 9 are conserved, wherein the peptide fragment binds to an antibody to a protein having ~~the an~~ amino acid sequence of SEQ ID NO:2.

42. (Currently amended): An isolated peptide fragment of SEQ ID NO: 9, wherein the peptide fragment binds to an antibody to a protein having ~~the an~~ amino acid sequence of SEQ ID NO: 2.

43. (Currently amended): A method for screening a compound that binds to the protein of claim 35, comprising the steps of:

Appl. No. 09/980,881  
Amdt. dated August 31, 2005  
Response to Notice of Allowanced  
dated June 1, 2005

PATENT

(a) contacting a test sample with an isolated peptide fragment of the protein of claim 35, wherein the peptide fragment comprises a C-terminal region in which at least 7 amino acids of SEQ ID NO: 9 are conserved, wherein the peptide fragment binds to an antibody to a protein having the ~~an~~ amino acid sequence of SEQ ID NO:2;

(b) detecting the binding activity between the test sample and the peptide variant;  
and

(c) selecting a compound that has an activity to bind to the peptide variant.

44. (Currently amended): A method for screening a compound that binds to the protein of claim 35, comprising the steps of:

(a) contacting a test sample with an isolated peptide fragment of SEQ ID NO: 9, wherein the peptide fragment binds to an antibody to a protein having the ~~an~~ amino acid sequence of SEQ ID NO: 2;

(b) detecting the binding activity between the test sample and the peptide variant;  
and

(c) selecting a compound that has an activity to bind to the peptide variant.